import vk

import requests

import vk\_api

import time

import networkx as nx

import numpy as np

import matplotlib.pyplot as plt

t = 0.35

session = vk.Session(

access\_token='7a1962712b257dad750e80310254db524e62e71c56012b44453c80f2d12b1a1925804c1f398b092669113')

api = vk.API(session)

friends = api.friends.get(user\_id=1)

time.sleep(t)

ouf = open('C:\PyCharm 2017.1\\test.txt', 'w')

dict = {}

def ppl(d, c):

c['1'] = friends

for a in d:

tmp = api.friends.getMutual(target\_uid=a)

c[a] = []

for key in tmp:

c[a].append(str(key))

time.sleep(t)

ppl(friends, dict)

for key in dict:

ouf.write(str(key))

ouf.write(' ')

for value in dict[key]:

ouf.write(str(value))

ouf.write(' ')

ouf.write('\n')

def adding\_edges(g, d):

for key in d:

for value in d[key]:

g.add\_edges\_from([(str(key), str(value))])

G = nx.Graph()

adding\_edges(G, dict)

val\_map = {'1': 1.0,

'8961298': 0.5714285714285714,

'296108131': 0.0}

black\_edges = [edge for edge in G.edges()]

values = [val\_map.get(node, 0.25) for node in G.nodes()]

pos = nx.spring\_layout(G)

nx.draw\_networkx\_nodes(G, pos, cmap=plt.get\_cmap('jet'), node\_color=values)

nx.draw\_networkx\_edges(G, pos, edgelist=black\_edges, arrows=False)

plt.show()